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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,210	10/13/2005	Herbert Wirz	2360-0429PUS1	1244

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EXAMINER

KEENAN, JAMES W

ART UNIT	PAPER NUMBER
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3652

NOTIFICATION DATE	DELIVERY MODE
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02/22/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/553,210	Applicant(s) WIRZ ET AL.	
	Examiner James Keenan	Art Unit 3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-14,16 and 18-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13,14 and 21 is/are allowed.
- 6) ☒ Claim(s) 1-6,8-12,16,18-20,22 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3652

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3/1-5/1, 6, 8, 10-12, 16, 19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peltomaki (EP 767,113) in view of Andrada Galan et al (US 5,211,523, hereinafter Galan), both previously of record.

Peltomaki shows a warehouse arrangement comprising a collecting device 20 movable over a storage area 3 by a robot 12, intermediate store 21 arranged on the collecting device for accommodating objects successively picked from the storage area in stacks or partial stacks in separate pick-up steps, and a gripping device 25, 26 arranged on the collecting device for lifting stacks or partial stacks, the gripping device being vertically movable and formed by “mutually opposite blades”, as broadly claimed.

Peltomaki does not teach the blades of the gripping device to be vertically movable “with respect to the intermediate store”. Further, the intermediate store of Peltomaki is not arranged in a fixed location above the storage area when the objects are being picked up.

Galan shows a collecting device 6 movable along rows or aisles of a warehouse for picking up objects 5 arranged in racks 4 adjacent the aisles, the device moved by an auto-guided vehicle 21 (i.e., robot), the device including an intermediate store 22 and a gripping device 23 vertically movable with respect to the intermediate store, the

Art Unit: 3652

intermediate store arranged in a fixed location as the objects are picked up by the gripping device to fill the intermediate store as the objects are successively picked up.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Peltomaki by utilizing blades of a gripping device which move vertically relative to the intermediate store, and to have arranged the intermediate store in a fixed location as the objects were picked up, as taught by Galan, to more effectively and efficiently pick-up a plurality of articles from various locations in the warehouse.

This also applies to corresponding method claim 16.

Re claim 3, the intermediate stores of Peltomaki and Galan are formed by "mutually opposite side beams", as broadly claimed.

Re claim 4, the blades of the gripping devices of Peltomaki are mounted in the side beams of the intermediate store.

Re claim 5, the vertical planes of the blades and side beams of Peltomaki enclose a space with a rectangular cross section.

Re claims 6, 19, and 22, note in Peltomaki "holding elements" on the lower edges of the blades (fig. 3).

Re claim 8, Peltomaki as modified does not show a vertically movable element at the upper end of the intermediate store to exert a downward force on the topmost object to stabilize the stack. However, the examiner takes Official Notice that it is generally well known in the stacking art to utilize a vertically movable device to exert a force on the topmost object in a stack to stabilize the stack, and in view thereof, it would have

Art Unit: 3652

been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Peltomaki with such a device as an obvious design expediency.

Re claim 10, note in Peltomaki “calibration parts” 23, 24, as broadly claimed.

Re claim 11, although Peltomaki’s calibration parts are not C-shaped, the particular shape is considered to be a design choice well within the level of ordinary skill in the art.

Re claim 12, absent any structural limitations, nothing precludes any two or more portions of the collecting device from being considered “a plurality of intermediate stores”. Further, Galan shows left and right intermediate stores.

3. Claims 2, 3/2-5/2, 9, 18, 20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peltomaki in view of Galan, as applied to claims 1 and 16 above, and further in view of Blakeley (US 2,735,713, previously cited).

Peltomaki as modified does not show the collecting device to comprise mutually opposite halves movable relative to each other.

Blakeley shows a device for collecting a plurality of stacked objects comprised of two mutually opposite halves B and C which are moved relative to each other to collect the objects therebetween.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the apparatus of Peltomaki by constructing the collecting device with relatively movable, mutually opposite halves, as shown by

Art Unit: 3652

Blakeley, as this would simply be an alternate equivalent, art recognized means of collecting vertically stacked articles, the use of which in the apparatus of Peltomaki would require no undue experimentation and produce no unexpected results.

Re claims 9, 18, and 23, note securing/holding elements 20 of Blakeley.

4. Applicant's arguments filed 12/01/10 have been fully considered but they are not persuasive.

Applicant argues that since Peltomaki's "tower-like frame" moves only vertically and moves in between closely spaced stacks of articles, modifying the arrangement thereof with Galan's clamp assembly, which requires horizontal movements and corresponding open spaces in which to work, would be counter to the teaching of Peltomaki. This is not persuasive. Applicant is reminded that the proposed modification involves substituting the vertically movable frame or "intermediate store" 21 of Peltomaki, which moves in concert with the gripping device, with the fixed intermediate store of Galan, to which the gripping device moves relatively vertically. The gripping device *per se* of Peltomaki would still move only vertically and in between closely spaced stacks of articles; the difference is that it would bring those articles to a fixed intermediate store rather than bringing the intermediate along. Despite applicant's assertion otherwise, this would allow more effective and efficient pick-up of articles from various locations because the entire intermediate store would not have to move up and down with the grippers. Not only would this allow the grippers to move independently of the store (and thus potentially allow it to begin moving vertically while the collecting

Art Unit: 3652

device as a whole is still moving horizontally toward the stack in which an articles or articles is/are to be picked up), but also decreases the inertia of the gripping device by no longer requiring it to move with the intermediate store, resulting in quicker movements with less powerful actuators.

Applicant also argues that Galan requires horizontal movements, while the claims recite vertical movement. While this may be so, the claims are not limited to only vertical movement, and thus do not preclude horizontal movement in addition thereto. Galan clearly utilizes vertical movement to at least some extent.

Finally, applicant argues that Blakely is non-analogous art. However, the dependent claims to which the Blakely reference has been applied concern a further limitation of the collecting device for picking up objects, and as such, one of ordinary skill would not limit a search of relevant art only to warehousing, but rather would look to the art of object grabbing in general.

5. Claims 13, 14, and 21 are allowed.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 3652

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is 571-272-6925. The examiner can normally be reached on Mon. - Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saul Rodriguez can be reached on 571-272-7097. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James Keenan/
Primary Examiner, Art Unit 3652

2/15/11